

SEQUENCE LISTING

<110> F. Hoffmann-la Roche AG
 <120> Use of Acid-Stable Subtilisin Proteases in Animal Feed
 <130> 6092.204-wo
 <140> DK 2000 00200
 <141> 2000-02-08
 <160> 7
 <170> PatentIn version 3.0
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His Arg Gln Pro Gly Ser Thr Ser Tyr Ile Tyr
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Trp

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His

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 -10 -5 -1 1 5

Pro Phe Gln Pro Ile Asn Lys Thr Leu Asp Lys Gly Ala Phe Glu Ser
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Gly Glu Val Ile Val Lys Phe Lys Asp Gly Val Ser Lys Lys Ala Gln
 25 30 35

Gly Ser Ala Leu Asn Lys Ala Glu Ala Asn Glu Gln Lys Ala Ser Ala
 40 45 50

Lys Asp Pro Phe Gln Val Leu Glu Val Ala Asp Val Asp Gln Ala Val
 55 60 65

Lys Ala Leu Glu Asn Asn Pro Asn Val Glu Tyr Ala Glu Pro Asn Tyr
 70 75 80 85

Thr Phe Gln Ala Thr Trp Ser Pro Asn Asp Pro Tyr Tyr Ser Ala Tyr
 90 95 100

Gln Tyr Gly Pro Gln Asn Thr Ser Thr Pro Ala Ala Trp Asp Val Thr
 105 110 115

Arg Gly Ser Ser Thr Gln Thr Val Ala Val Leu Asp Ser Gly Val Asp
 120 125 130

Tyr Asn His Pro Asp Leu Ala Arg Lys Val Ile Lys Gly Tyr Asp Phe
 135 140 145

Ile Arg Arg Arg Arg Arg Ile Met Arg Leu Arg Gly His Gly Thr His
 150 155 160 165

Val Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg
 170 175 180 185 190 195

Gly Met Ala Pro Arg Thr Tyr Ile Leu Ala Val Arg Val Leu Asp Ala
 200 205 210 215 220 225

Arg Arg Arg Gly Arg Leu Arg Arg Arg Arg Arg Arg Arg Arg Arg Arg
 230 235 240 245 250 255 260 265 270 275

Ala Val Val Val Ala Ala Ala Gly Asn Asp Asn Val Ser Arg Thr Phe
 250 255 260
 Gln Pro Ala Ser Tyr Pro Asn Ala Ile Ala Val Gly Ala Ile Asp Ser
 265 270 275
 Asn Asp Arg Lys Ala Ser Phe Ser Asn Tyr Gly Thr Trp Val Asp Val
 280 285 290
 Thr Ala Pro Gly Val Asn Ile Ala Ser Thr Val Pro Asn Asn Gly Tyr
 295 300 305
 Ser Tyr Met Ser Gly Thr Ser Met Ala Ser Pro His Val Ala Gly Leu
 310 315 320 325
 Ala Ala Leu Leu Ala Ser Gln Gly Lys Asn Asn Val Gln Ile Arg Gln
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 35 40 45
 Thr Thr Ser Thr Ala Ser Arg Asn Leu Asn Ala Asn Arg Ile Gly Thr
 50 55 60 65
 Thr Arg Arg Ala Thr Arg Val Thr Tyr Thr Thr Thr Arg Ala Thr Thr
 70 75 80 85
 Thr Ile Asn Ala Tyr Thr Thr Thr Thr Gly Ala Thr Thr Gly Leu Gly
 90 95 100 105
 Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr

Ala Ser His Pro Glu Phe Glu Gly Arg Ala Ser Gln Ile Lys Ser Phe
130 135 140

Ile Ser Gly Gln Asn Thr Asp Gly Asn Gly His Gly Thr His Cys Ala
145 150 155 160

Gly Thr Ile Gly Ser Lys Thr Tyr Gly Val Ala Lys Lys Thr Lys Ile
165 170 175

Tyr Gly Val Lys Val Leu Asp Asn Ser Gly Ser Gly Ser Tyr Ser Gly
180 185 190

Ile Ile Ser Gly Met Asp Phe Ala Val Gln Asp Ser Lys Ser Arg Ser
195 200 205

Cys Pro Lys Gly Val Val Ala Asn Met Ser Leu Gly Gly Gly Lys Ala
210 215 220

Gln Ser Val Asn Asp Gly Ala Ala Ala Met Ile Arg Ala Gly Val Phe
225 230 235 240

Leu Ala Val Ala Ala Gly Asn Asp Asn Ala Asn Ala Ala Asn Tyr Ser
245 250 255

Pro Ala Ser Glu Pro Thr Val Cys Thr Val Gly Ala Thr Thr Ser Ser
260 265 270

Asp Ala Arg Ser Ser Phe Ser Asn Tyr Gly Asn Leu Val Asp Ile Phe
275 280 285

Ala Pro Gly Ser Asn Ile Leu Ser Thr Trp Ile Gly Gly Thr Thr Asn
290 295 300

Thr Ile Ser Gly Thr Ser Met Ala Thr Pro His Ile Val Gly Leu Gly
305 310 315 320

Ala Tyr Leu Ala Gly Leu Glu Gly Phe Pro Gly Ala Gln Ala Leu Cys
325 330 335

Lys Arg Ile Gln Thr Leu Ser Thr Lys Asn Val Leu Thr Gly Ile Pro
340 345 350

Ser Gly Thr Val Asn Tyr Leu Ala Phe Asn Gly Asn Pro Ser Gly
355 360 365

110-120
111-121
112-122
113-123
114-124
115-125

Asn Ala Val Thr Ile Thr Gly Ile Thr Asn Val Gln Ala Thr Thr Ala
370 375 380 385 390

Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr

Phe	Val	Pro	Gly	Glu	Pro	Ser	Tyr	Gln	Asp	Gly	Asn	Gly	His	Gly	Thr	50	55	60
His	Val	Ala	Gly	Thr	Ile	Ala	Ala	Leu	Asn	Asn	Ser	Ile	Gly	Val	Val	65	70	75
Gly	Val	Ala	Pro	Asn	Ala	Glu	Leu	Tyr	Ala	Val	Lys	Val	Leu	Gly	Ala	85	90	95
Asn	Gly	Ser	Gly	Ser	Val	Ser	Ser	Ile	Ala	Gln	Gly	Leu	Gln	Trp	Thr	100	105	110
Ala	Gln	Asn	Asn	Ile	His	Val	Ala	Asn	Leu	Ser	Leu	Gly	Ser	Pro	Val	115	120	125
Gly	Ser	Gln	Thr	Leu	Glu	Leu	Ala	Val	Asn	Gln	Ala	Thr	Asn	Ala	Gly	130	135	140
Val	Leu	Val	Val	Ala	Ala	Thr	Gly	Asn	Asn	Gly	Ser	Gly	Thr	Val	Ser	145	150	155
Tyr	Pro	Ala	Arg	Tyr	Ala	Asn	Ala	Leu	Ala	Val	Gly	Ala	Thr	Asp	Gln	165	170	175
Asn	Asn	Asn	Arg	Ala	Ser	Phe	Ser	Gln	Tyr	Gly	Thr	Gly	Leu	Asn	Ile	180	185	190
Val	Ala	Pro	Gly	Val	Gly	Ile	Gln	Ser	Thr	Tyr	Pro	Gly	Asn	Arg	Tyr	195	200	205
Ala	Ser	Leu	Ser	Gly	Thr	Ser	Met	Ala	Thr	Pro	His	Val	Ala	Gly	Val	210	215	220
Ala	Ala	Leu	Val	Lys	Gln	Lys	Asn	Pro	Ser	Trp	Ser	Asn	Thr	Gln	Ile	225	230	235
Arg	Gln	His	Leu	Thr	Ser	Thr	Ala	Thr	Ser	Leu	Gly	Asn	Ser	Asn	Gln	245	250	255
Phe	Gly	Ser	Gly	Leu	Val	Asn	Ala	Glu	Ala	Ala	Thr	Arg				260	265	